

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A biomember ~~which is~~ comprising a porous body of a calcium phosphates sintered body ~~comprising~~ having a number of substantially globular pores ~~[[(1)]]~~ and a skeletal part, wherein the skeletal part is compactly sintered, a porosity of the porous body is not less than 55% and not more than 85%, and ~~simultaneously~~, a mean pore diameter which is not less than 50 μ m and not more than 800 μ m, wherein the globular pores include a plurality of large pores a pore (11) having a size larger than the mean pore diameter, wherein the large pores have ~~[[has]]~~ at least three communicating pores ~~[[(2)]]~~ having a diameter of not less than 5 μ m, on the average, and ~~simultaneously, a pore having at least the three communicating pores (2) at least one of the communicating pores has at least one communicating pore (2) having a diameter of not less than 25 μ m, on the average, wherein the large pores have open areas communicating to other pores such that a total of the open areas and simultaneously, a total opening area of the communicating pore (2) which is possessed by the pore (11) having a size larger than said mean pore diameter occupies~~ ~~[[the]]~~ a ratio of not more than 50% of a pore surface area on the average, ~~[[and]]~~ whereby in a dry state, it is possible to wet the whole of the porous body by dropping water and blood.

2. (Currently Amended) A biomember ~~which is~~ comprising a porous body of a calcium phosphates sintered body ~~comprising~~ having a number of substantially globular pores ~~[[(1)]]~~ and a skeletal part, wherein the skeletal part is compactly sintered, ~~a porosity of~~ wherein the porous body has a porosity which is not less than 65% and not more than 85%, and ~~simultaneously~~, a mean pore diameter which is not less than 100 μ m and not more than 600 μ m, wherein the globular pores include a plurality of large pores a pore (11) having a size larger than the mean pore diameter, wherein the large pores have at least four communicating pores ~~[[(2)]]~~ having a diameter of not less than 5 μ m, on the average, and ~~simultaneously, a pore having at least the four communicating pores (2) at least one of the communicating pores~~

has ~~at least one communicating pore (2)~~ having a diameter of not less than 50 μ m, on the average, wherein the large pores have open areas communicating to other pores such that a total of the open areas and simultaneously, a total opening area of the communicating pore (2) which is possessed by the pore (11) having a size larger than said mean pore diameter occupies [[the]] a ratio of not more than 40% of a pore surface area on the average, [[and]] whereby, in a dry state, it is possible to wet the whole of the porous body by dropping water and blood.

3. (Currently Amended) A biomember according to claim 2, wherein ~~the pore (11) having a size larger than the mean pore diameter~~ the large pores have [[has]] at least six communicating pores [[(2)]] having a diameter of not less than 10 μ m, on the average, and ~~simultaneously, a pore having at least two pores among the six communicating pores (2) has at least two communicating pores (2) having~~ have a diameter of not less than 50 μ m, on the average, wherein 50% or more of all pores in the porous body have pore diameters which range within $\pm 30\%$ of the mean pore diameter.

4. (Currently Amended) A biomember according to claim 1, wherein ~~the large pores have~~ a sum of a flat area of a pore (11) shown in any plain cross section and having a size larger than the mean pore diameter open areas which appear in any cross section of the porous body, when the porous body is cut, which is not less than 25% and not more than 60% of the [[flat]] whole area of the [[total]] cross section of the porous body.

5. (Currently Amended) A biomember according to claim 1, wherein ~~the large pores have~~ a sum of a flat area of a pore (11) shown in any plain cross section and having a size larger than the mean pore diameter open areas which appear in any cross section of the porous body, when the porous body is cut, which is not less than 35% and not more than 55% of the [[flat]] whole area of the [[total]] cross section of the porous body.

6. (Currently Amended) A biomember according to claim 1, wherein when ~~the sintered porous body is a sintered body which is~~ processed, washed and dried and is brought into contact with water or blood without pretreatment, the water or blood infiltrates can infiltrate into a core part of the porous body by a capillary phenomenon.

7. (Currently Amended) A biomember according to claims 1, wherein micro particles of submicron order are used as raw material, and a skeletal part of a sintered body ~~carries grain growth to have a compact skeleton of~~ comprises grains grown to about 5 micron.

8. (Currently Amended) A biomember according to claim 1, wherein ~~[[a]] the~~ thickness of a circumference part formed between the adjacent large pores which are overlapped of a communicating pore (2) formed by causing a pore (11) to overlap with a pore (11) having a size larger than the mean pore diameter is set to be ~~of about~~ approximately equal to the thickness of a particle of calcium phosphate in the porous body.

9. (Currently Amended) A biomember according to claim 1, wherein a pore ~~[[(1)]]~~ is formed from foaming by stirring a slurry.

10. (Currently Amended) A biomember according to claim 1, wherein calcium phosphates sintered body is hydroxyapatite ~~[[(8)]]~~.

11. (Currently Amended) A biomember according to claim 1, wherein the globular pores contain therein an osteogenic cell, automyelocyte, homogeneous myelocyte, fetal myelocyte, undifferentiated stem cell, osteogenic cell to which a gene of an active factor is introduced, automyelocyte to which a gene of an active factor is introduced, homogeneous myelocyte to which a gene of an active factor is introduced, fetal myelocyte to which a gene of an active factor is introduced, or undifferentiated stem cell to which a gene of an active factor ~~is introduced is introduced into a pore (1)~~.

12. (Currently Amended) A biomember according to claim 1, wherein an active material ~~[[(6)]]~~ is attached on an inner surface of a pore ~~[[(1)]]~~.

13. (Currently Amended) A biomember according to claim 12, wherein an active material ~~[[(6)]]~~ is one chosen from a cell adhesion promoting material, cell proliferation promoting material, osteogenesis promoting material, bone absorption inhibiting material and vascularization promoting material, or combinations of at least two of cell adhesion promoting material, cell proliferation promoting material, osteogenesis promoting material, bone absorption inhibiting material and vascularization promoting material.

14. (Currently Amended) A biomember according to claim 12, wherein an osteogenic cell, automyelocyte, homogeneous myelocyte, fetal myelocyte, undifferentiated stem cell, osteogenic cell to which a gene of an active factor is introduced, automyelocyte to which a gene of an active factor is introduced, homogeneous myelocyte to which a gene of an active factor is introduced, fetal myelocyte to which a gene of an active factor is introduced, or undifferentiated stem cell to which a gene of an active factor is introduced is introduced into a pore [(1)].

15. (Currently Amended) A biomember according to claim 1, wherein drugs are stored in a pore [(1)], and the whole is used as sustained release preparations.

16. (Currently Amended) A biomember of which a part or the whole of an outer surface of a compact member [(21)] is made of a porous member (22) ~~consisted of~~ comprising a calcium phosphates sintered body, wherein the compact member [(21)] has a porosity of not less than 0% and not more than 15%, the porous member [(22)] has a porosity of not less than 55% and not more than 85%, and ~~simultaneously, a pore (3) of the~~ porous member [(22)] is comprised of assembling substantially globular pores [(3)], a mean pore diameter which is not less than 50 μm and not more than 400 μm , wherein the globular pores include a plurality of large pores ~~the pore (3)~~ having a size larger than the mean pore diameter ~~has, wherein the large pores have~~ at least three communicating pores having a diameter of not less than 5 μm , on the average, and ~~simultaneously, a pore having at least the three communicating pores~~ at least one of the communicating pores has at least one communicating pore having a diameter of not less than 25 μm , on the average, wherein the large pores have open areas communicating to other pores such that a total of the open areas ~~and simultaneously, the pore (3) having a size larger than the mean pore diameter is opened as the communicating pore in the~~ has a ratio of not more than 50% of the pore surface area on the average, and the porous member [(22)] can wet the whole of the biomember by dropping water and blood in a dry state.

17. (Currently Amended) A biomember according to claim 16, wherein a compact member [(21)] is metal or ceramics.

18. (Currently Amended) A biomember according to claim 16, wherein an intermediate layer is formed between a compact member [(21)] and a porous member [(22)].

19. (Currently Amended) A biomember according to claim 18, wherein [(an)] the intermediate layer ~~is comprised of~~ comprises at least one of glass for a living body, calcium phosphate, or calcium titanate.

20. (Currently Amended) A biomember according to claim 19, wherein a porous member [(22)] ~~is comprised of~~ comprises hydroxyapatite, and an intermediate layer is hydroxyapatite formed by spray coating.

21. (Currently Amended) A biomember according to claim 16, wherein a biomember is an artificial joint, and a porous member [(22)] is a stem part thereof.

22. (Currently Amended) A biomember according to claim 16, wherein an active material is attached to a pore inner surface of a porous member [(22)].

23. (Currently Amended) A biomember according to claim 16, wherein an osteogenic cell, automyelocyte, homogeneous myelocyte, fetal myelocyte or undifferentiated stem cell is introduced into a pore [(3)] of [(a)] the porous member [(22)].

24. (Currently Amended) A biomember according to claim 16, wherein an osteogenic cell to which a gene of an active factor is introduced, automyelocyte to which a gene of an active factor is introduced, homogeneous myelocyte to which a gene of an active factor is introduced, fetal myelocyte to which a gene of an active factor is introduced, or undifferentiated stem cell to which a gene of an active factor is introduced is introduced into a pore [(3)] of a porous member [(22)].

25. (Currently Amended) A biomember which has a porous sintered body comprising at least compact a dense part [(31)] and a porous part [(32)] made of ~~comprised of~~ a calcium phosphates sintered body, wherein the ~~compact~~ dense part [(31)] has a porosity of not less than 0% and not more than 20%, and the porous part [(32)] has a

porosity of not less than 55% and not more than 85%, ~~wherein and simultaneously, a pore (3)~~ of the porous part ~~[[(32)]]~~ ~~has is comprised of assembling~~ substantially globular pores ~~[[(3)]]~~, ~~wherein~~ a mean pore diameter ~~of the globular pores~~ is not less than 50 μ m and not more than 800 μ m, ~~wherein the pore (3)~~ large pores having a size larger than the mean pore diameter have at least three communicating pores having a diameter of not less than 5 μ m, on the average, ~~wherein and simultaneously, a pore having among~~ the three communicating pores has at least one communicating pore having a diameter of not less than 25 μ m, on the average, ~~and simultaneously, wherein the pore (3) having a size larger than the mean pore diameter is~~ the large pores are opened as ~~[[the]]~~ a communicating pore in the ratio of not more than 50% of a pore wall surface area on the average, ~~[[and]]~~ so that at least the porous part ~~[[(32)]]~~ can wet the whole of the sintered body by dropping water and blood in a dry state.

26. (Currently Amended) A biomember according to claim 25, wherein a compact part ~~[[(31)]]~~ has a porosity of not less than 0% and not more than 20%.

27. (Currently Amended) A biomember according to claim 25, wherein at least a pore ~~[[(3)]]~~ of ~~[[a]]~~ the porous part ~~[[(32)]]~~ is formed from foaming by stirring a slurry.

28. (Currently Amended) A biomember according to claim 25, wherein ~~[[a]]~~ the calcium phosphates sintered body ~~[[is]]~~ comprises hydroxyapatite.

29. (Previously Presented) A biomember according to claim 25, wherein an active material is attached on the inner surface of a pore.

30. (Currently Amended) A biomember according to claim 25, wherein at least one of an osteogenic cell, automyelocyte, homogeneous myelocyte, fetal myelocyte and undifferentiated stem cell is introduced into a pore ~~[[(3)]]~~.

31. (Currently Amended) A biomember according to claim 25, wherein at least one of an osteogenic cell to which a gene of an active factor is introduced, automyelocyte to which a gene of an active factor is introduced, homogeneous myelocyte to which a gene of an active factor is introduced, fetal myelocyte to which a gene of an active factor is introduced

and undifferentiated stem cell to which a gene of an active factor is introduced is introduced into a pore [(3)].

32. (Currently Amended) A biomember according to claim 25, wherein drugs are stored in a pore [(3)].

33. (Currently Amended) A biomember according to claim 1, wherein ~~a sintered~~ the porous body is a perfectly sintered body [[that]] wherein adjacent particles are contacted compactly and grain growth is completed.

34. (Currently Amended) A biomember according to ~~claim 1~~ claims 1 or 25, wherein ~~a sintered~~ the porous body is that has unevenness as a surface characteristic which is substantially less between particles after sintering, the surface is smooth and the adjacent particles are contacted compactly.

35. (Currently Amended) A biomember according to ~~claim 1~~ claims 1 or 25, wherein a pore wall has a dense microstructure.

36. (Currently Amended) A method of ~~preparing~~ fabricating a biomember ~~claimed in claim 1, wherein a biomember is obtained by stirring and foaming, then, drying and sintering slurry raw material comprising:~~

preparing a slurry including a cross-polymerizable resin polymer and hydroxyapatite particles having a particle diameter such that a mean particle diameter is not less than 0.1 μ m and not more than 1 μ m;

stirring the slurry to form bubbles or pores;

stabilizing a shape of the bubbles or pores by the cross-polymerizable resin polymer included in the slurry after stirring;

drying the slurry to form a dried body;

sintering the dried body at about 1100°C to make a hydroxyapatite porous body having hydroxyapatite particles, wherein the particles are grown so as to have an average particle diameter of 2-3 μ m and a maximum diameter of 5 μ m or less.

37. (Currently Amended) A method according to claim 36, wherein a calcium phosphate particle of slurry raw material has a particle diameter such that a mean particle diameter is of submicron order (~~i.e., not less than 0.1 μm and not more than 1 μm~~).

38. (Original) A method according to claim 37, wherein a maximum particle diameter of a calcium phosphate particle of slurry raw material is of submicron order.

39. (Previously Presented) A method according to claim 36, wherein a porous body has a particle diameter of approximately 0.1 μm in a dry state, and a particle diameter of approximately 2-3 μm by particle diameter growth after sintering.

40. (Currently Amended) A method according to claim 36, wherein a pore shape of a raw material particle is stabilized by a polymer cross-polymerizable resin ~~which is polymer~~.

41. (Currently Amended) A method according to claim 36, wherein a submicron particle ~~performs undergoes~~ grain growth by sintering to ~~[[be]]~~ become a particle having a diameter not more than 5 micron, ~~and a skeleton becomes a compact apatite structure by the grain growth~~.

42. (Currently Amended) A method according to claim 36, wherein a porous part ~~(32) comprised of~~ comprising a calcium phosphates sintering body is installed ~~in the compact part (31)~~ on a dense part having a porosity of 20 % or less.